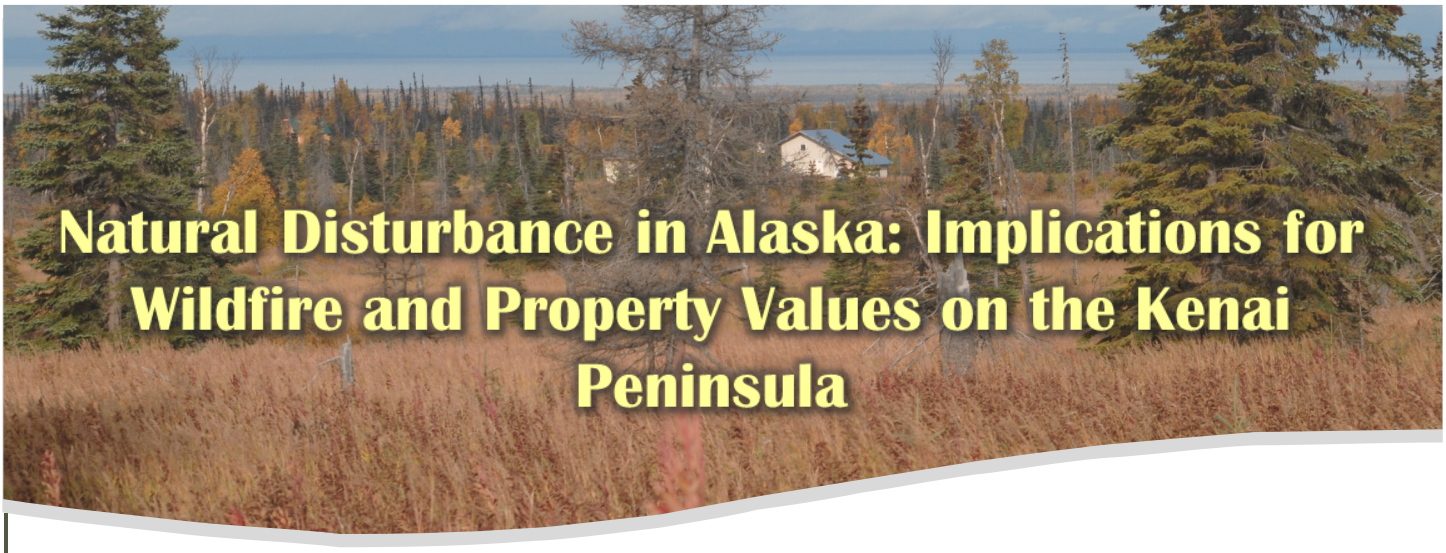


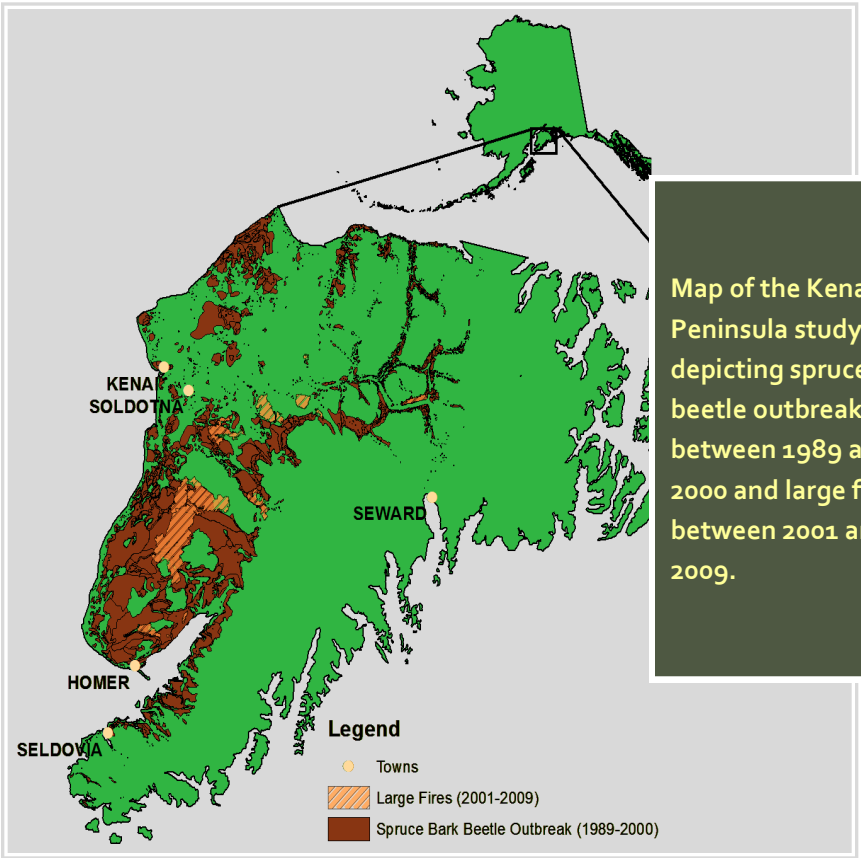
Natural Disturbance in Alaska: Implications for Wildfire and Property Values on the Kenai Peninsula

Project Description

Climate warming is an important factor that has contributed to increases in the frequency and severity of wildfires and epidemic spruce bark beetle outbreaks in the boreal forest. These changes are likely to alter ecosystems, as well as the way Alaskans view and use their surrounding environment. A massive spruce bark beetle outbreak occurred on the Kenai Peninsula, Alaska during the 1990s. Many residents and resource managers are concerned that past outbreaks have created novel hazardous fuel conditions and changed wildfire dynamics on the Kenai. At the same time, there has been a continued influx of people moving to the Kenai Peninsula, many of whom live in rural areas impacted by bark beetles.

Project Objectives

- Assess whether and how spruce bark beetle outbreaks affect wildfire characteristics (probability of ignition and extent) on the Kenai Peninsula, Alaska.
- Evaluate how private property values in the wildland-urban interface are influenced by wildfire and spruce bark beetle outbreaks on the Kenai Peninsula, Alaska.



Map of the Kenai Peninsula study area depicting spruce bark beetle outbreaks between 1989 and 2000 and large fires between 2001 and 2009.

Photo (Above): Property in spruce bark beetle damaged forest. Photo by W. Hansen.

Project Timeline

Fall 2012

Develop retrospective regression models evaluating changes in the characteristics of wildfires as a result of spruce bark beetle outbreak.

Fall 2012

Integrate wildfire and spruce bark beetle information with assessed property value data.

Fall 2012

Develop hedonic models that describe how property values have varied over time as a function of property characteristics, socio-economic conditions, the characteristics of past wildfire and spruce bark beetle outbreaks.

Winter 2012

Conduct a stakeholder workshop with land managers to discuss the relevance of results for managing land of Kenai Peninsula, and think about their implications for the future of ecosystem stewardship of the region.

Spring 2013

Complete written thesis and prepare articles for publication.

Wildfires burning in beetle killed hazardous fuels (AKDOF).

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For more information on fire science related research, visit the ***Alaska Fire Science Consortium*** at:

http://akfireconsortium.uaf.edu

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